Gateway

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The ARRL Packet-Radio Newsletter

SIXTH ARRL AMATEUR RADIO COMPUTER NETWORKING CONFERENCE

The Sixth ARRL Amateur Radio Networking Conference will be hosted by the TRW Amateur Radio Club and the Southern California Digital Communications Council. The conference will be held at the TRW Space and Technology facility located on Compton Boulevard (between Freeman Avenue and Aviation Boulevard), Redondo Beach, California, on Saturday, August 29 from 9 AM to 6 PM. The actual location of the conference is the TRW cafeteria just south of the white high-rise TRW administration building.

A separate dining room will be set up for demonstrations. Demonstrators will be allowed to enter the facility at 8 AM to set up. A beginners' presentation will be given at 9 AM. The main conference will start at 10 AM.

There are no commercial food establishments within walking distance; numerous eateries are within a short drive. Consider bringing a box lunch.

The TRW ARC swap meet will be located about 1/4 mile from the main cafeteria. Personnel will be on hand to give directions. The swap meet starts at 7 AM and runs through the morning.

The official hotel for this year's conference is the Torrance Marriott, 3635 Fashion Way, Torrance, CA 90503-4897. For reservations phone: (213) 316-3636. Say you're going to the ARRL Computer Networking Conference and receive the special rate of $55.00 (per night/double occupancy).

If you wish to propose any special activities for this event, please feel free to contact Wally Linstruth, 133 East De La Guerra #10, Santa Barbara, CA 93101 (805-966-6424).

From "I-Frame"

SIXTH CONFERENCE PAPERS

A list of the papers to be presented at the Sixth ARRL Amateur Radio Networking Conference follows.

"Estelle: A Formal Description Technique For Communication Protocols," Michel Barbeau, VE2BPM

"OSI: A Plan Comes Together," J. Gordon Beattie, Jr., N2DSY, Thomas A. Moulton, W2VY

"A High Performance Packet Switch," Mike Brock, WB6HHV, Franklin Antonio, N6NKF, Tom Lafluer, KA6IQA

"The KISS TNC: A Simple Host-To-TNC Communications Protocol," Mike Chepponis, K3MC, Phil Karn, KA9Q

"Digital Signaling Processing And Amateur Radio," Dr. Thomas A. Clark, W3IWI, Dr. Robert W. McGwier, N4HY

"A Duplex Packet Radio Repeater Approach To Layer One Efficiency," Robert Finch, N6CXB, Scott Avent, N6BGW

"Packet Radio Developments Over The Last Year," Terry Fox, WB4JFI

"Thoughts On The Issues Of Address Resolution And Routing In Amateur Packet Radio TCP/IP Networks," Bdale Garbee, N3EUA

"The Design Of A Mail System For The KA9Q Internet Protocol," Bdale Garbee, N3EUA, Gerard van der Grinten, PA0GRI

"A Bit Error Rate Tester For Testing Digital Links," Steve Goode, K9NG

"A 56 Kilobaud RF Modem," Dale A. Heatherington, WA4DSY

"Reusable IP Addresses In A Dynamic Network," Robert B. Hoffman, N3CVL

"Software Design Issues For The PS-186 Advanced Packet Network Controller," Brian Kantor, WB6CYT

"Another Look At Authentication," Phil Karn, KA9Q

"A High Performance, Collision-Free Packet Radio Network," Phil Karn, KA9Q

"The KA9Q Internet (TCP/IP) Package: A Progress Report," Phil Karn, KA9Q

"Approach For Digital Transmission Of Pictures," Thomas Kieselbach, DL2MDE (translated by Don Moe, DJ0HC/KE6MN)

"RUDAK - The Packet Radio Experiment On-Board OSCAR P3C," Hanspeter Kuhlen, DK1YQ

"Improving Shared Channel Access Techniques For Amateur Packet Radio," Brian Lloyd, WB6RQN

"The Noise Performance Of Several Data Demodulators," Hugo Lorente, LU4DXT

"Overview Of The TEXNET Datagram Protocol," T. C. McDermott, N5EG

"CSMA Multihop Networks: Throughput Analysis," Dr. Robert W. McGwier, N4HY

"DSP Modems: It's Only Software," Dr. Robert W. McGwier, N4HY

"HF Packet: Where Do We Go From Here?" Barry D. McLarnon, VE3JF

"FINDER--The Family Information Database For Emergency Responses," W. E. Moerner, WN6I, Sharon Moerner, N6MWD, David Palmer, N6KL

"Dial "O" For Operator: Message Routing In The Amateur Packet Network," Thomas A. Moulton, W2VY

"Packet Radio And IP For The UNIX Operating System," Clifford Neuman, N1DMM, Wayne Yamamoto

"Pacgram Messaging Protocol For Packet Networks," Jay Nugent, WB8TKL

"Performance Monitoring Or I Wanna Fix It, Is It Broke?" Skip Hansen, WB6YMH, Harold Price, NK6K

"ASC X12.A-1985: Draft Proposed American National Standard For Electronic Business Data Interchange Amateur Radio Message Transaction Set," Jack Sanders, NC4E

"Design Abstractions For Protocol Software," Paul Taylor, VK2BLY

Copies of the proceedings will be sold at the conference for $10.00 each. They will also be available from HQ at $10.00 plus shipping and handling ($2.50 per order for postage, $3.50 for UPS). When ordering from HQ, specify the Sixth Computer Conference. (Proceedings from the earlier conferences are also available from HQ.)

PACKET RADIO SUPPORTS PIKES PEAK HILL CLIMB

Traditionally, the Pikes Peak Radio Amateur Association has provided communications support for the internationally recognized Pikes Peak Auto Hill Climb. On the day of this year's race, 50 amateurs equipped with hand-held and mobile transceivers provided safety communications for the full length of the 12.42-mile course. Malcolm Benton, KE9S, organized and supervised this effort. Malcolm also provided a portable digipeater for the practice and qualification runs during the week preceding the race.

The 1987 version of the race on Saturday, July 11, saw many new communications innovations. This year the timing steward, Warren Hickey, WOYNE, made use of packet radio to forward start, finish, and radar times; and ATV provided video. ATV was provided by Oak Stockton, KOROL, and Chas Barrett, WBOOCJ.

There were three operational packet-radio sites. One was at the start line to relay start times, another at the finish line to relay finish times. Radar times recorded along the route were relayed to the finish line by voice. The packet-radio station at the finish line, manned by Bdale Garbee, N3EUA, was a key to the success of the operation. It relayed all times in a predetermined format. The forwarded packets went from the summit of Pikes Peak to a second floor room of the Clarion Hotel in Colorado Springs. The room was used exclusively for communications and race result data processing. (The Pikes Peak Auto Hill Climb Association headquarters for the race were also at the hotel.)

During the practice runs, qualification runs, and the race itself, the room was a beehive of activity. By the way, a claim is made for "The World's Smallest Antenna Farm" by the hams involved. It was a 6-foot by 7-foot deck outside the second floor room that held an 11-element VHF beam, an 11-element UHF beam, a 450-MHz magnetic mount, a 220-MHz magnetic mount, and a 220 MHz vertical.

Needless to say, the hotel room was loaded with radios, amplifiers, power supplies, and TNCs. In addition, there were computers: an AT clone with printer, and IT&T XT clone with printer, and a Compaq. The king-size bed, inviting as it was around the third day, did not get much (any) use, but had a lot of junque sitting on it.

The operating team consisted of Andy Freeborn, NØCCZ, at the packet-radio communications gear and two nonhams at the computers doing data processing. Race results in compiled statistical form were available within minutes of the last finish time by the data processors.

Each year the communications support for the Hill Climb becomes more sophisticated. Plans are already afoot for major improvements in packet-radio support for next year. These plans include several improvements to the automation of race data forwarding and processing.

From Andy Freeborn, NOCCZ, in RMPRA>Packet

ACKNOWLEDGING NTS PACKET RADIO TRAFFIC

There seems to be some problem with duplicate messages appearing on other traffic nets off of packet. It has occurred to me that perhaps there is some confusion about the procedure that must be followed when "Rogering" traffic, so, just a reminder: please use the KT command followed by the message number when acknowledging traffic. Do not use the K command, otherwise, a station will not know that another station has taken that traffic. Note that with the KT command, a service message is automatically sent back to the station of origin indicating who took that message. Additionally, the KT followed by a give message number takes that message off the active list on the PBBS.

Handling traffic via packet radio is really a neat way to do it. The procedures are in place for the efficient handling of such traffic. So, let's try to be a little more careful when killing traffic. If you are disconnected before you can invoke the KT command, I suggest you do not handle that traffic until you can properly acknowledge it.

From Betsey Doane, K1EIC, STM Connecticut

20 METER PACKET RADIO NET

You are invited to join a 20-meter packet-radio system operators/system users net that meets on Sundays at 0200 UTC (that's Saturday at 10 PM EDT) on 14.280 MHz, plus or minus QRM. This is an informal voice net and all "packet people" are invited to participate. -- Fred, N2FOZ

NTS SECTION NODES UPDATE

The following list represents the National Traffic System packet radio section nodes throughout the United States and Canada as of August 1, 1987.

NTS ARRL Section Designator	Primary Section Node	State And ARRL Section Served
First Region		
NTSMA	K1UGM	Massachusetts
NTSEMA	K1UGM	Eastern Mass.
NTSWMA	K1UGM	Western Mass.
NTSME	WB1DSW	Maine
NTSNH	WB1DSW	New Hampshire
NTSVT	KD1R	Vermont
NTSCT	K1CE	Connecticut
NTSRI	N1DKF	Rhode Island
Second Region		
NTSNJ	WA2SNA, KB1BD	New Jersey
NTSNNJ	WA2SNA	Northern N.J.
NTSSNJ	KB1BD	Southern N.J.
NTSNY		New York
NTSNLI	AI2Q	NYC-Long Island
NTSENY	WA2RKN, WB2QJA	Eastern New York
NTSWNY	W2ICZ, KC3BQ	Western New York
Third Region		
NTSDE	WB3FFV	Delaware
NTSPA	KB3UD	Pennsylvania
NTSEPA	KB3UD	Eastern Penn.
NTSWPA	W2XO	Western Penn.
NTSMDC	W3IWI	Maryland-DC
Fourth Region		
NTSFL		Florida
NTSSFL	N2WX	Southern Florida
NTSNFL	K4OZS	Northern Florida
NTSGA	WA4VMV	Georgia
NTSNC	Unknown	North Carolina
NTSSC	KF4EF	South Carolina
NTSVA	WA4ONG-10	Virginia
NTSWIN	KR5S	West Indies
Fifth Region		
NTSAL	WA5DVV	Alabama
NTSAR	Unknown	Arkansas
NTSLA	WA5DVV, WD5B	Louisiana
NTSMS	WA5DVV	Mississippi
NTSOK	WD5B	Oklahoma
NTSTN	WD5B	Tennessee
NTSTX	W5XO, WA5JXY	Texas
NTSSTX	WB5BBW	Southern Texas
NTSNTX	Unknown	Northern Texas
NTSWTX	AE5I	West Texas
Sixth Region		
NTSCA	W6CUS	California
NTSSDG	NK6K	San Diego
NTSSB	W6IXU	Santa Barbara
NTSORA	W6IXU	Orange
NTSLAX	W6IXU	Los Angeles
NTSEB	W6CUS	East Bay
NTSSV	WD6BFC	Sacramento Valley
NTSSJV	N6HAV	San Joaquin Valley
NTSSCV	W6CUS	Santa Clara Valley
NTSSF	W6CUS	San Francisco
NTSPAC	KH6WY	Pacific
NTSHI	KH6WY	Hawaii
NTSNV	WB7BNI	Nevada
Seventh Region		
NTSAB	Unknown	Alberta
NTSAK	KL7GNG	Alaska
NTSBC	VE7CFL, VE7KIT, VE7TOM	British Columbia
NTSID	KE7OM	Idaho
NTSMT	Unknown	Montana
NTSOR	W7XI	Oregon
NTSWA	WB7DCH	Washington
Eighth Region		
NTSOH	AD8I	Ohio
NTSMI	W9ZRX	Michigan
NTSWV	AD8I, W3IWI	West Virginia
Ninth Region		
NTSIL	W9ZRX	Illinois
NTSIN	W9ZRX, AD8I	Indiana
NTSKY	W9ZRX, AD8I	Kentucky
NTSWI	WD9DHI	Wisconsin
Tenth Region		
NTSIA	NOAN	Iowa
NTSMO	Unknown	Missouri
NTSKS	Unknown	Kansas
NTSMB	VE4ANR	Manitoba
NTSMN	WAOCQG	Minnesota
NTSNE	Unknown	Nebraska
NTSND	VE4AFO	North Dakota
NTSSD	WAOCQG	South Dakota
NTSSK	Unknown	Saskatchewan
Eastern Canada		
NTSMR	Unknown	Maritimes
NTSNF	Unknown	Newfoundland
NTSON	VE3GYQ	Ontario
NTSPQ	VE2ED	Quebec
Twelfth Region		
NTSAZ	KR5S, WB7BNI	Arizona
NTSCO	W1HAB, KOHOA	Colorado
NTSUT	WA7UZO	Utah
NTSNM	KN5D	New Mexico
NTSWY	Unknown	Wyoming

Notes:

1. Primary NTS Section nodes should have the initial routing information for all of the state designators in their forwarding tables; SYSOPs should autoforward NTS mail towards the destination nodes listed above in the most efficient manner possible.

2. To send a radiogram, the sender should only need to know the addressee's state designator.

3. NTS/packet operators should look at the path information in received messages to determine any problem delays in routing.

4. NTS-appointed Region Packet Managers should monitor Section-to-Section traffic flow.

5. Responsibility for NTS traffic clearance of

section traffic bulletin boards rests with the Section Traffic Manager.

From Rick Palm, K1CE, Field Services Manager

HUNTING 'N' PECKING

Since becoming Gateway editor, a number of packet people have asked me why I don't mention my packet-radio address for input to Gateway. The reason I don't is that such communications could be construed as business communications, which is verboten! But, that does not mean that you can not send me a personal message via my packet radio address (WA1LOU @ W1AW-4).

Another question I have received is "how does one know when one's subscription runs out?" There are two ways. At the end of the first line of your Gateway mailing label, the number following the letter P (for paid) represents the number of issues remaining on your current subscription. Also, when there are only three issues left on your current subscription, you will receive a card in the mail reminding you to renew.

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